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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/818,435      | 03/27/2001  | Thomas G. Mason      | RDH0006             | 2059             |

7590 11/26/2002

Ronald D. Hantman  
ExxonMobil Research and Engineering Company  
P.O. Box 900  
Annandale, NJ 08801-0900

EXAMINER

NORTON, NADINE GEORGIANNA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1764

4

DATE MAILED: 11/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/818,435

Applicant(s)

MASON ET AL.

Examiner

Nadine Norton

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 11, 12, 14 is/are rejected.
- 7) ☒ Claim(s) 3-10, 13 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 112 1st***

Claims 11-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. While claim 11 defines specific equation parameters, it fails to recite any positive steps for accomplishing the claimed estimation.

***Claim Rejections - 35 USC § 112 2nd***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is indefinite because it is unclear what specific process steps are accomplished by the claim.

Claim 14 is indefinite because it is unclear how the claim can depend on both claims 12 and 13. The multiple dependency makes the specific cumulative combination of limitations unclear.

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***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ganeshan (5,843,303) or Sung et al.(5,207,891).

Applicants are claiming a process for disaggregating asphaltenes in petroleum oils and oil mixtures comprising mild heating.

The reference of Ganeshan(5,843,303) discloses heating a petroleum oil. See column 1, lines 31-34.

The reference of Sung et al.(5,207,891) discloses gas oil containing asphaltenes are heated. See column 7, lines 10-15.

The disclosure of the same heating step would inherently disaggregate the asphaltenes and obtain a disaggregated composition with the same characteristics defined in applicants' claim 1. The same step is considered to produce the same product conversion.

Applicants' process is anticipated by the references of Ganeshan (5,843,303) or Sung et al.(5,207,891) because the references disclose essentially the same heating step claimed by applicants.

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***Claim Rejections - 35 USC § 103***

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ganeshan (5,843,303) or Sung et al.(5,207,891) as applied to claim 1 above, and further in view of Jones et al.(5,969,237).

It is noted that the references of Ganeshan (5,843,303) or Sung et al.(5,207,891) do not disclose or suggest employing a SANS method to determine the presence of Asphaltenes.

The reference of Jones et al. (5,969,237) illustrates that SANS is a known method for determining the presence of asphaltenes. See column 2, lines 19-30. Note: The use of the SANS method would encompass a coherent and incoherent component as defined in applicants' claim 2.

Applicants' process is a combination of the known heating step of Ganeshan (5,843,303) or Sung et al.(5,207,891) and the known SANS step for determining asphaltenes in Jones et al.(5,969,237). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the known heating steps of Ganeshan (5,843,303) or Sung et al.(5,207,891) and the known SANS step of Jones et al.(5,969,237) because it has been held that a process is not patentable where a process is an obvious combination of two processing steps, wherein each process step lends to end products that each process step is known to produce when practiced alone and there exists no coaction between the steps that produces unexpected results. In re Fortess and Schoeneberg, 152 USPQ 13 (CCPA 1966). In this case, each known step is performed independently without producing unexpected results.

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***Response to Arguments***

Applicants' arguments filed 9-23-02 in paper no.3 have been fully considered but they are not persuasive.

Applicants' arguments asserting that applicants' invention distinguishes over the applied references because it involves SANS is not persuasive. In response, it is maintained that the rejected claims are not limited to using SANS. The rejected claims only require that a mild heating step is accomplished without reference to SANS. Additional limitations (i.e. the use of SANS) are not read into the claims. In addition, applicants' disaggregation would inherently occur by accomplishing the same mild heating step.

Furthermore, applicants' arguments against the secondary reference of Jones are not persuasive because such arguments are directed at the invention of Jones. In this case, the "prior art section" of Jones was referred to in the rejection in order to support the premise that SANS is a known method for determining the presence of asphaltenes. As a result, applicants' second process step defined in claim 2 is also a known step. It is maintained that the combination of two known steps to accomplish two known results is within the level of ordinary skill. Applicants have not shown anything unexpected by combining two known steps to accomplish two known results.

***Allowable Subject Matter***

Claims 3-10, 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose or suggest applicants' "q" range in claims 3, 13, and 15.

In addition, the prior art does not disclose applicants' equation fitting technique in claims 4-10.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadine Norton whose telephone number is 703-305-2667. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

N.N.

November 23, 2002

**NADINE G. NORTON**  
**PRIMARY EXAMINER**

